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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/237,183

01/26/1999

NORDINE CHEIKH

16517.228

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28381

7590

02/24/2005

ARNOLD & PORTER LLP
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EXAMINER

MARSCHER, ARDIN H

ART UNIT

PAPER NUMBER

1631

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/237,183

Applicant(s)

CHEIKH ET AL.

Examiner

Ardin Marschel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/8/03, 3/8/04, 6/29/04, & 10/12/04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 and 7-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2 and 7-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Applicants' arguments; filed 7/8/03, 3/8/04, 6/29/04, and 10/12/04; have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

NEW MATTER

Claims 2 and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

This rejection is necessitated by amendment. Applicants have amended claim 2 to respectively connect enzymes encoded by specific SEQ ID Nos. which introduces NEW MATTER into the claims. Consideration of the listing of sequences and associated enzyme names near the end of the specification as filed reveals that these associations are set forth separately for maize and soybean sequences. For example, SEQ ID NO: 11 is listed under maize triose phosphate isomerase and not as a soybean enzyme. Instant claim 2 lists the enzymes by name in the last 3 lines of the claim but indicates that these are either maize or soybean enzymes in line 2 of claim 2 thus being inclusive of either maize or soybean enzymes as named in the last 3 lines of the claim. Since each SEQ ID NO: has been associated as filed with specifying either maize or

soybean enzyme this association with either maize or soybean enzyme(s) is added plant types over what was disclosed as filed and therefore NEW MATTER. This is an issue for all of the SEQ ID Nos: listed in claim 2. An additional specific NEW MATTER issue is that SEQ ID NO: 935 is listed in the specification as being directed to maize invertase whereas, in contrast, sucrose synthase is the enzyme listed as respectively corresponding to SEQ ID NO: 935, both in claim 2 and 20.

VAGUENESS AND INDEFINITENESS

Claims 2, 26, and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims containing abbreviations remain rejected on the basis that such abbreviations are unclear unless accompanied by their full name(s), such as NDP and UDP. Applicants argue that the abbreviations are well known in the art and supply one document for each abbreviation for support. In response a single document is reasonably lacking in sufficient support for each abbreviation being well known.

LACK OF UTILITY REJECTION

Claims 2 and 7-27 are rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility due to its not being supported by either a specific and/or substantial utility or a well established utility.

This rejection is maintained and reiterated from the previous office action, mailed 4/16/03. Applicants argue that it has been acknowledged that the specification discloses multiple utilities such as probes etc. In response these utilities have been set

forth in the previous office action(s) as lacking patentable utility due to lacking specific and/or substantial utility support. Applicants then argue that the claimed invention is useful in identifying genes associated with the plant sucrose pathway. In response, this argument supports the requirement for further research in order to establish a patentable utility since such identification practice is clearly a research project without defining any specific or substantial utility for any sucrose pathways genes that may be identified. Additionally, the specification lacks specific procedures for performing such identification thus also failing to provide a utility in currently available form. Applicants go on to argue that such uses are analogous to a microscope which is utilized for identifying and characterizing structure of biological tissues in various samples. In response a microscope, more particularly, is well known to be useful in cancer diagnosis of biopsies tissue which is a well known specific and substantial utility. Simply identifying and characterizing structure in samples would itself be insufficient for patentable utility. The instantly claimed invention goes no further than such identification and characterization and thus lacks either a specific or substantial utility in contrast to the above noted well known microscope utility. Applicants then argue that the indication that the instantly claimed nucleic acids are used as generally applicable to any nucleic acid is legally insufficient due to this indicating a requirement for exclusivity of utility, exemplified by a new golf club analogy. In response this basis for this rejection based on general nucleic acid usage was set forth to support the nonspecific nature of the asserted utility for the instantly claimed invention and not for exclusivity of utility. Thus, applicants' argument is not directed to the basis for this aspect of this lack of

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utility rejection and therefore moot. Applicants then argue that the instantly claimed nucleic acids identify a unique subset of related sequences as a golf club uniquely hits a golf ball. In response, such identification of a subset of related sequences still lacks any specific or substantial utility as to what such a subset is used for. No specific or substantial utility has been asserted or seen for such a subset so, therefore, its identification is insufficient to result in a currently available utility that is either specific or substantial. This argument also, therefore, is non-persuasive. Applicants then argue that factual reasoning is required to support this rejection argued also as based on a lack of a credible utility. In response several literature documents were cited in a previous office action which clearly supports this rejection in that sequence similarity to assign or establish function is unreliable and in substantial. Applicants have not argued this factual basis for this rejection and therefore this argument is an allegation which ignores the factual basis for this rejection and therefore is non-persuasive. Moreover this rejection is based on a lack of either a specific or substantial utility, or a well established utility, and is not based on credibility. It is noted utility may either be supported by a credible, specific, and substantial utility, or, a well established utility. Therefore, the combination of credible, specific, and substantial utility must be met or a well established utility. The lack of either a specific and substantial utility thus supports this basis for this rejection regarding said combination without credibility being cited as a basis.

LACK OF ENABLEMENT

Claims 2 and 7-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

This rejection is maintained and reiterated from the previous office action, mailed 4/16/03. Applicants argue that this rejection would be overcome if the above lack of utility rejection is overcome. In response, the above lack of utility rejection is maintained as is this corresponding rejection.

LACK OF WRITTEN DESCRIPTION REJECTION

Claims 2 and 18-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

This rejection is maintained and reiterated from the previous office action, mailed 4/16/03, only regarding claims which clearly include embodiments directed to encoding specific enzymes wherein the provided sequences are fragments at best thereof and do not provide written description of full enzyme encoding nucleic acid(s). Applicants argue that a representative number of nucleic acids provides written basis for a genus thereof. In response only one specific is reasonably not a representative number to

support a genus of some breadth, in this case, a fragment of an encoding nucleic acid reasonably lacks written basis for a full length coding sequence for an enzyme.

Applicants then argue that they do not have to describe all things encompassed by the claims. In response no such "all things" description has been set forth as a requirement and therefore this argument is not directed to the basis of the rejection and therefore moot. Applicants further argue that the instant sequences define common structural features of members of a genus to distinguish them from others. In response there is no instant disclosure of the sequences in the instant claims being a common feature nor is there any disclosure in the specification that the SEQ ID Nos. are or should define some type of genus. Thus, applicants' argument is based on information and disclosure that is at best only an allegation of such distinguishing common features and therefore is not based on the facts of the instant disclosure and thus non-persuasive as being only an allegation without factual support.

No claim is allowed.

Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the Central PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CFR § 1.6(d)). The Central PTO Fax Center number is (571) 273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ardin Marschel, Ph.D., AU 1631 Supervisory Patent Examiner, whose telephone number is (571) 272-0718. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instrument Examiner, Tina Plunkett, whose telephone number is (571) 272-0549.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 22, 2005

 2/22/05
ARDIN H. MARSCHEL
PRIMARY EXAMINER